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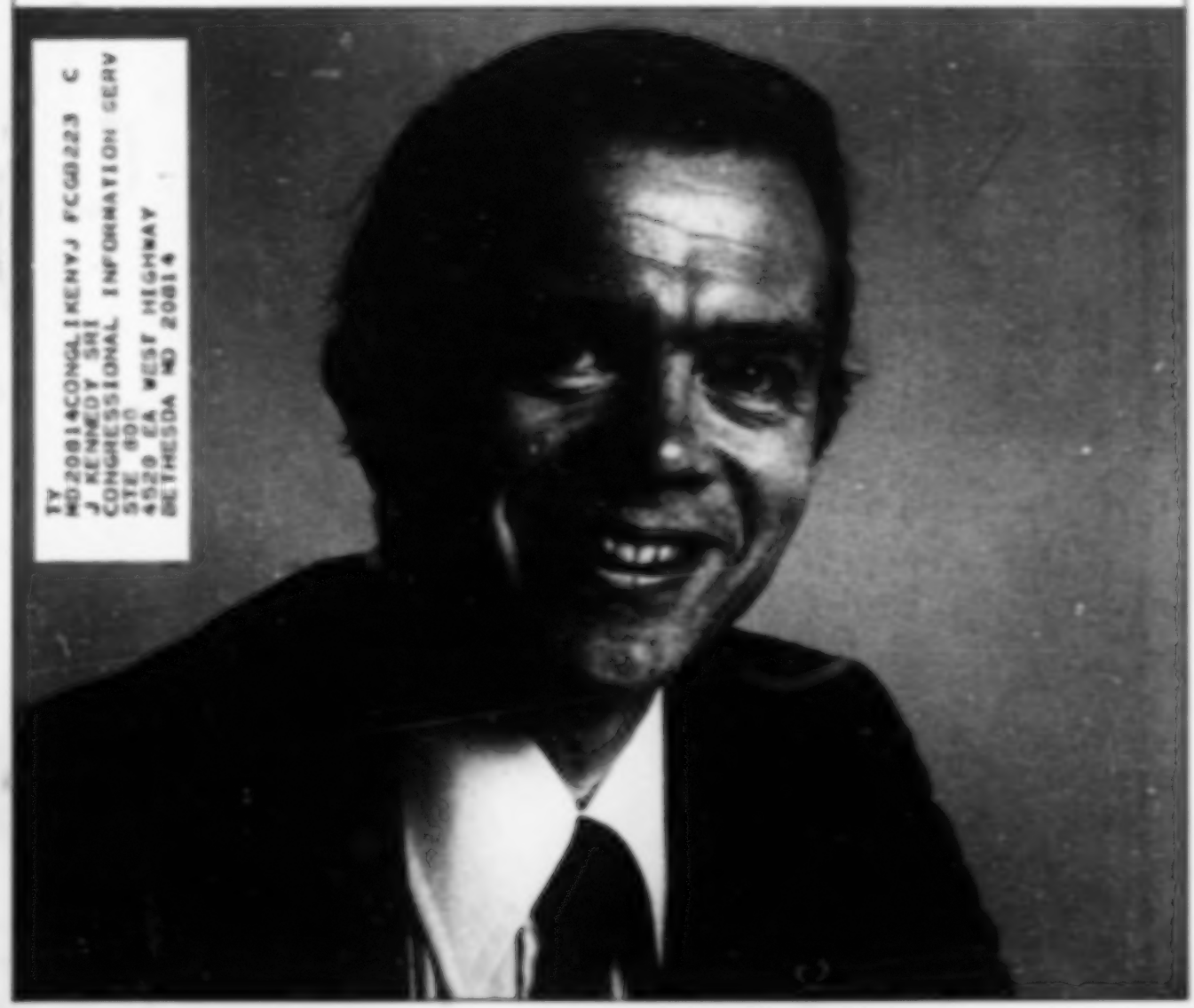

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Japanese telecommunications takes on a brand new look

ETSUZO MASUDA

TWO EVENTS are exciting Japanese businesses and consumers as well. One is privatization of Nippon Telegraph and Telephone Public Corp. (NTT) and the other is the evolution of INS (Information Network System, the Japanese version of the integrated services digital network, or ISDN).

Although the bills to privatize NTT were not enacted in the preceding Diet, the national legislative body, because of lack of time, agreement was reached between the ruling Liberal Democratic Party and the leading opposition Socialist Party to pass the bills in the December session. The privatization legislation, which took the form of three reform bills, now has been passed (TELEPHONY, Jan. 14, p. 13). The laws will take effect this spring. On the closing day of the past session, the chairman of the All Telecommunications Workers' Union (ATWU) expressed his view that the failure to enact the bills was regrettable and his union would press the Socialist Party for early enactment in the next session. Considering that the ATWU is one of the largest constituents of the Socialist Party, and that all other opposition parties (except the Communists) were in favor of privatization, passage of the necessary bills was ensured. Both NTT and the private sector have been preparing for the coming competition earnestly, assuming that the necessary legislation would be passed.

Meanwhile, the Sept. 28, 1984, im-

Continued on page 43

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Table 1

Classification of carriers and applicable regulations

Category 1 carriers	Those who own their own facility		
Category 2 carriers	Those who rent telecommunications facility of others to run their business	**General second class**	Other than the special second class
		Special second class	Those running nationwide system or international services

	Category 1	Category 2	
		General second	**Special second**
Commencement of business	Approval by the Ministry of Posts and Telecommunications (MPT)	Notification to MPT	Registration to MPT
Rates, terms and conditions	Approval by MPT	Free	Notification to MPT
Publication of rates, terms and conditions	Required	Not required	Required
Duty to provide services	Required	Not required	Not required
Discontinuance of services	Approval of MPT	Notification to MPT	Notification to MPT
Report to and inspection by MPT	Report and inspection	Report	Report and inspection

Continued from page 42

plementation of the INS model system connecting Musashino and Mitaka with central Tokyo inspired considerable enthusiasm among businesses and citizens who want to participate in this state of the art telecommunication experiment that includes digital telephony, digital facsimile, telewriting and video response systems (see story on p. 64). There were a considerable number of firms that established their branch offices or company-financed employe residences so as not to miss the opportunity to try the new communication possibilities and accumulate experience ahead of others.

Although it may seem strange to some outside observers, even the labor unions and NTT have supported privatization. The stringent regulation placed on the present NTT explains this phenomenon.

Capitalization, management and organization of NTT was stipulated in the Nippon Telegraph and Telephone Public Corporation Act, and services, rates, terms and conditions were written into the Public Telecommunications Act. NTT's president and vice president were appointed by the prime minister and their budget was approved by the Diet. Rates and charges for principal services (exchange line rental, local and toll call charges) were written into the act and other rates and charges were approved by the Ministry of Posts and Telecommunications (MPT). Wages of NTT workers were part of the budget approved by the Diet and as often as not they were set at a level commensurate with those of the deficit-creating Japan National Railroad workers. Dr. Hisashi Shinto, who was appointed president of NTT in 1981, lamented that his authority was less than that of a plant manager of a private company. He came to NTT from the shipbuilding industry, which is well known for its competitive cost reduction efforts. Shinto firmly believed that productivity of Japan's communication industry, which is vital for Japan's success in the coming information age, could not be promoted without the introduction of competition.

The ATWU, frustrated by its lack of success in efforts to raise wages and improve working conditions because of the government's policy of treating all government workers equally, put its hopes for improvement in the privatization of NTT.

Of course, industry is supporting the privatization enthusiastically because it believes privatization is a good business opportunity and could lead to reduced toll rates. Consumers are not very aware of what it will bring. At present, consumers seem to welcome the increased NTT productivity and cheaper toll rates. At one time an NTT top official announced that there would be no major increase in local rates for the next 2 years.

As for the government, which is led by the majority Liberal Democratic Party, administrative reform was its top priority and it was firmly behind the NTT privatization bills. The birth of the Nippon Telegraph and Telephone Company Ltd. on April 1, 1985, thus was assured.

Table 2
Planned applications

Company	Application
Gakushu Kenkyusha (school magazine)	Movie for video response system (VRS) Information provision through videotex
Kyowa Bank	Home banking and home shopping by videotex
Recruit (help wanted magazine)	Help wanted ads by videotex
Japan Airline	Flight schedule and reservation by videotex
Tokyo Toyopet (automobile)	Car sales by videotex
Daikyo Oil	Leisure information by videotex
Misawa Home (building)	Home building information by VRS
Secom	Home security
Nagasakiya (department store)	Home shopping by videotex
Sebu Distribution Group	Home shopping by videotex
Marui (installment)	Home shopping by videotex
Mitsukoshi (department store)	Home shopping by videotex
Tokyu (department store)	Home shopping by videotex Various information by VRS
Keio Teito Electric Railway	Real estate consultation by teleconference Shopping by videotex or VRS at stations and city center offices
Meiji Life Insurance	Life insurance information by VRS
PIA (town information magazine)	Movie, theater and cultural events by videotex
Kinki-Nippon Tourist	Traveling information by videotex Movies on scenic beauty on VRS
Matsuzakaya (department store)	Home shopping by videotex Fashion information by VRS

Privatization bills

Three bills enacted into law are the Electric Telecommunications Business Law, the Nippon Telegraph and Telephone Company Law and the law regarding adjustment of related affairs (TELEPHONY, Jan. 14, p. 13). The Telecommunications Law stipulates terms and conditions for operating telecommunications systems in Japan. The NTT monopoly of domestic public telecommunications was abolished by the law and other companies now may enter the field under conditions set forth in the law. Unlike the basic and enhanced services dichotomy adopted in the United States, the law introduces facility-based carrier and resale carrier categories and applies different regulations to each. Resale carriers are further classified into large public carriers and small special application carriers, and they are treated differently. The classification of carriers and applicable regulation is shown in Table 1.

The Nippon Telegraph and Telephone Company Law stipulates that Nippon Telegraph & Telephone Public Corp. will be dissolved on April 1 when the Nippon Telegraph and Telephone Company Ltd. (NTT) is created. It will be a company with limited liability, issuing shares one-third of which are always held by the government. NTT's executive officers and auditors will be appointed with the approval of the MPT, its annual business plan must be approved by the MPT and transfer of its major assets needs MPT approval.

Possible entrants

At least four entities are planning to enter the telecommunication market

Continued on page 45

Table 3
Business interest in top 10 new services

As a venture

VAN	27.8%
Videotex	22.8
CATV	21.8
Electronic shopping	17.4
Online database	14.2
Information provision by video disks	14.1
VRS	12.5
Voice response system	11.6
Information provision by floppy disks	10.9
Electronic banking	10.4

As a user

VAN	58.7%
LAN	58.7
Online database	55.9
Videotex	46.9
Electronic mail	41.3
Teleconference	40.4
Electronic banking	37.6
CATV	33.9
Satellites	33.6
Information retrieval from disks	12.9

as facility-based Category I carriers. Two are Daini Den Den, NTT, advocated by the Kyocera Co., and joined by Sony, Ushio Electric and Secom, Co., Nihon Telecom, created by the Japan National Railroad. In addition, the Ministry of Construction-Japan Highway Public Corp. group and the prestigious Keidanren (Federation of Economic Organizations) are planning to establish telecommunication lines along the lucrative route connecting Tokyo and Osaka (Japan's second largest city) with Nagoya (the third largest city) located in between.

While Kyocera is the earliest starter and famous for its innovative management, it may have difficulty in acquiring the necessary rights of way, and some observers predict that some merging among the candidates may be inevitable (for instance, Daini Den Den could merge with the Japan Public Highway Corp.) Uncertainty about the access charge to be imposed by NTT for the use of the local network is another factor that greatly worries the candidates. As for the value-added carriers planning to operate on a resale basis, there are too many to cite specific names but they are mostly private systems connecting shippers, freighters and distributers, or manufacturers, suppliers and distributers allowing the use of spare capacity in the general public subscriber service. International Business Machines Corp. (IBM) reportedly is entering the Japanese value-added network (VAN), joining the Mitsubishi Trading Company, Japan IBM, Cosmo Eighty and American Telephone & Telegraph Co. (AT&T) are also making a joint effort to introduce NET 1000 technology in cooperation with Nihon Kogyo Bank, Mitsui Trading Co., Mitsui Bank, Sony and others. NTT has its own packet switched and circuit switched data networks, but the number of subscribers is limited.

Creation of INS

NTT is committed to the creation of a nationwide ISDN as a cost effective means of carrying data as well as voice communication originating from and terminating at a single access line. NTT is planning to provide digital links to 40% of subscribers in the cities of prefectural government seats by 1987, 60% by 1990 and 100% by 1995. Optical fiber toll circuits will be laid between Tokyo, Nagoya and Osaka this year and the circuits connecting Sapporo in the extreme north and Fukuoka in the south will be completed by March 1985. NTT will not wait until the introduction of INS

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to improve existing services and its facsimile network. Digital data networks (both packet switched and circuit switched) and the videotex network will be expanded in the meantime based on existing technology. Digitization of the network will be made on a replacement basis when the service life of existing facilities expires.

An INS model system was started with due pomp on Sept. 28, 1984. Applications planned by participants are shown in Table 2.

Initial reception of the INS model system was enthusiastic, once causing the video response system to go out of order because it received too many calls at one time.

A total of 569 companies responding to a Nikkei Business magazine questionnaire showed more interest as users of new telecommunications services than did investors (Table 3).

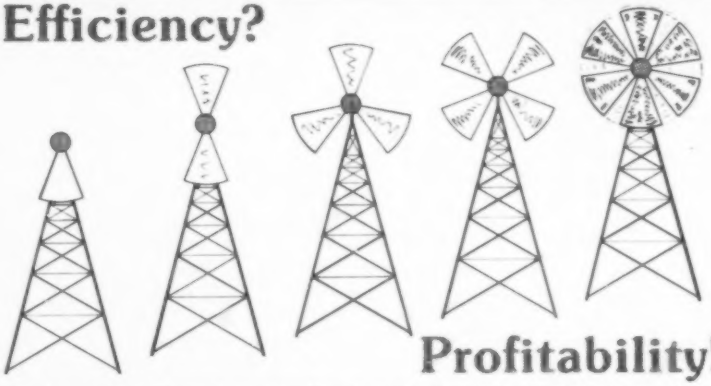
'Although it may seem strange . . . even the labor unions and NTT have supported privatization.'

After a month of experimentation, the initial enthusiasm for the INS new services is waning somewhat. As of Oct. 31, 1984, 10,000 visitors had been received at the demonstration rooms. Approximately 165,000 calls were originated, of which 100,000 were completed and 65,000 encountered busy signals or other difficulties. Use was mostly made at the demonstration rooms and few calls were made from monitors' residences or offices. Between Oct. 15 and Oct. 19, the average number of calls originated daily from a telewriter machine was 0.63. The average number of calls originated from a digital telephone was 16.8 daily between Oct. 1 and Oct. 5, but the number decreased to 7.5 between Oct. 22 and Oct. 26.

It seems that the market for the variety of new services provided through a digital switched public network is yet to develop. However, many companies are unwilling to be left behind others on the way to the new world to be created by the INS.

Although they are driven by dreams rather than by facts, the resulting competiton may bring a competitive edge to the Japanese telecommunications industry. □

Efficiency?



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